



## Quick Reference Guide: AR-5316

### *The AR-5316 Digital Multifunctional IMAGER™*

### Description: Features & Options

#### Why the AR-5316...

Designed for small offices and workgroups, the new Sharp AR-5316 Digital IMAGER delivers the performance you need in a multifunction document system—all in a cost-efficient, compact design. With 11" x 17" copying capability, standard 600 dpi host-based printing, a 250-sheet paper capacity, and 100-sheet bypass tray, this efficient performer can easily keep up with the pace of busy offices. With an optional network print server, the Sharp AR-5316 Digital IMAGER can be easily shared by additional users in your office or workgroup. Combine all these features with Sharp's world-class reliability, and you've got a small office document system that's hard to beat.



*Shown with optional 40-sheet document feeder.*

#### Features

- ✓ 16 PPM copy speed
- ✓ 600 dpi true laser quality output
- ✓ 25% - 400% zoom range with 8 preset ratios
- ✓ X/Y Zoom
- ✓ 350-sheet paper capacity, including 100-sheet Bypass Tray
- ✓ Optional 40-sheet Single Pass Document Feeder
- ✓ Cost-effective Toner-Save mode
- ✓ Scan-Once Print-Many Memory Management
- ✓ 600 dpi host-based PC printing system
- ✓ Standard IEEE 1284 parallel and USB-1.1 ports for flexible PC connections
- ✓ Easy to change, customer-replaceable supply system
- ✓ Network printing option
- ✓ Compact wingless design



*The user-friendly control panel makes it easy to use the AR-5316 Imager's advanced copy features.*

#### Efficient, High-Quality Copying

The AR-5316 IMAGER provides many flexible copy features designed to grow with your business. With a speedy, 16 page-per-minute copy speed and the capability to output documents at 11" x 17", the AR-5316 IMAGER delivers advanced flexibility for any small office or workgroup. With customer-replaceable supplies that are easy to install, you can rest assured that your workflow will always keep moving.



#### Advanced Network Printing

Growing businesses or small workgroups can easily add network printing with the optional PRICOM™ 3100 print server. With a built-in RJ-45 Ethernet port, this compact print server connects directly into the parallel port of the AR-5316. With simple, plug-and-play operation and an easy-to-use interface, the PRICOM 3100 server delivers advanced features that include web-based management, IP filtering, and intelligent device monitoring.



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## Pre-Setup: Tools, Documentation, & Admonitions



## Toolbox Basics

## Mechanical

- Screwdriver, Phillips #2
- Screwdriver, Flat #1
- Wrench, 1.5mm Hex head
- Feeler gauges

## Electrical

- Voltmeter
- ESD wrist or ankle strap
- Approved surge suppressor
- 30x lighted viewing device

## Miscellaneous

- Clean, soft, lint-free cloths
- Alcohol

## Special Tools & Service Documentation

| Description                     | Part No.                                  |
|---------------------------------|-------------------------------------------|
| AR-5316, Service Manual         | SM_AR-5316<br>Code: 00ZAR5316/A1E         |
| AR-5316, Parts Guide            | PG_AR-5316<br>Code: 00ZAR5316/P1E         |
| *AR-RP6 / AR-SP6 Service Manual | SM_AR-RP6 / AR-SP6<br>Code: 00ZARSP6//A1E |

\* Optional equipment

**Material Safety Data Sheets  
(MSDSs)\***

| Product Code | Description                       | MSDS No. |
|--------------|-----------------------------------|----------|
| AR-016TD     | Toner developer cartridge (Black) | F-31381  |
| AR-016DR     | Drum cartridge                    | F-01381  |

\* Download MSDSs at <http://www.sharp-service.com>

## Electrical/Electronic Component Admonitions



**WARNING:** Electrical hazard. Employ proper precautions when working with high-voltage electrical equipment.

**CAUTION:** Improper handling of electronic components can damage the equipment.

Properly ground and wear an electro-static device (ESD) on your wrist or ankle when working with electronic modules. Similarly, use anti-static bags to protect electronic components during storage or shipping.

## Laser Admonition



For your protection, do not remove protective covers or bypass safety interlocks.

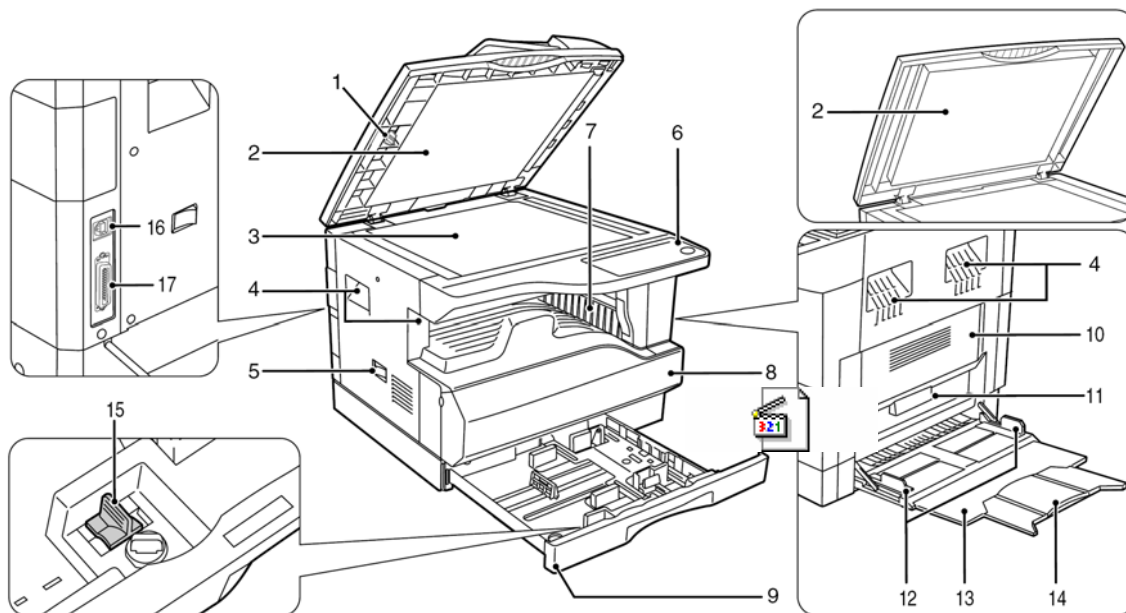
ESD



## External Views

## Quick Reference Guide: AR-5316

### Basic System Configuration



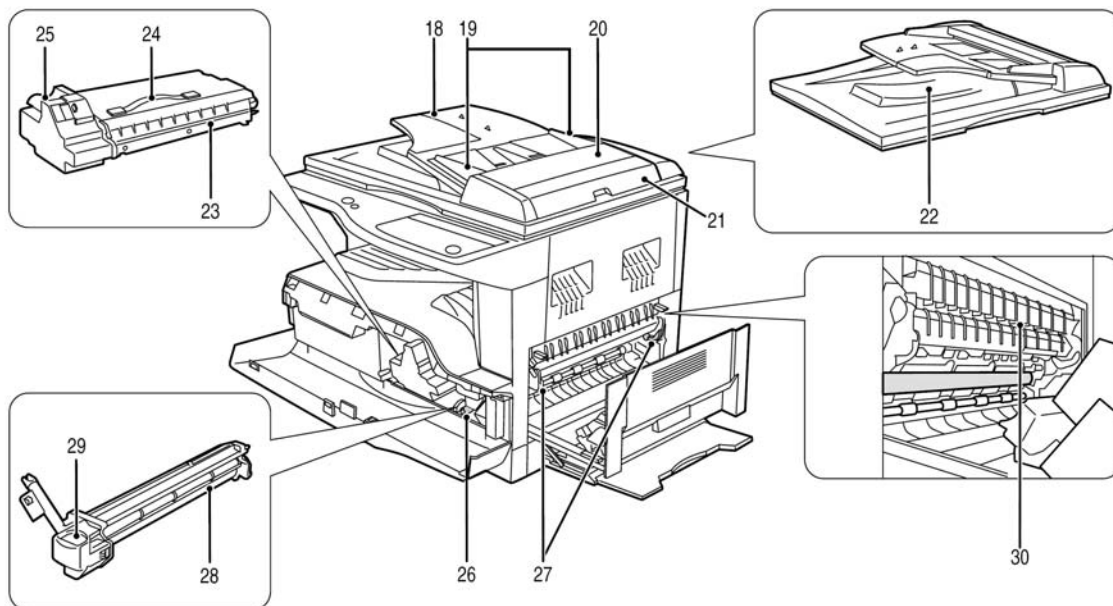
|    |                   |    |                                                                          |    |                    |
|----|-------------------|----|--------------------------------------------------------------------------|----|--------------------|
| 1  | Glass cleaner     | 2  | Document feeder cover<br>(when the SPF is installed) /<br>document cover | 3  | Document glass     |
| 4  | Handles           | 5  | Power switch                                                             | 6  | Operation panel    |
| 7  | Paper output tray | 8  | Front cover                                                              | 9  | Paper trays        |
| 10 | Side cover        | 11 | Side cover handle                                                        | 12 | Bypass tray guides |
| 13 | Bypass tray       | 14 | Bypass tray extension                                                    | 15 | Charger cleaner    |



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### Basic System Configuration (cont'd)

#### Internal Views



|    |                                                  |    |                                             |    |                                                  |
|----|--------------------------------------------------|----|---------------------------------------------|----|--------------------------------------------------|
| 18 | Document feeder tray (when the SPF is installed) | 19 | Original guides (when the SPF is installed) | 20 | Feeding roller cover (when the SPF is installed) |
| 21 | Right side cover (when the SPF is installed)     | 22 | Exit area (when the SPF is installed)       | 23 | TD cartridge                                     |
| 24 | TD cartridge strap                               | 25 | TD cartridge lock release lever             | 26 | Roller rotating knob                             |
| 27 | Fusing unit release levers                       | 28 | Drum cartridge                              | 29 | Drum cartridge handle                            |
| 30 | Fusing unit paper guide                          |    |                                             |    |                                                  |



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Optional Equipment

### Optional Equipment

| No. | Option Name                 | Model     |
|-----|-----------------------------|-----------|
| 1   | 40-Sheet Single Pass Feeder | AR-SP6N   |
| 2   | Network Print Server        | AR-PS3100 |



## Quick Reference Guide: **AR-5316**

### Adjustment Item List

### Adjustments

| Section |                          | Adjustment Item |                                                                                                        | Adjustment Procedure/SIM No.                                                                             |
|---------|--------------------------|-----------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
|         |                          |                 |                                                                                                        |                                                                                                          |
| A       | Process section          | (1)             | Developing doctor gap adjustment                                                                       | Developing doctor gap adjustment                                                                         |
|         |                          | (2)             | MG roller main pole position adjustment                                                                | MG roller main pole position adjustment                                                                  |
|         |                          | (3)             | Developing bias voltage check                                                                          |                                                                                                          |
|         |                          | (4)             | Main charger voltage check                                                                             |                                                                                                          |
| B       | Mechanism section        | (1)             | Image position adjustment                                                                              | SIM-50                                                                                                   |
|         |                          | (2)             | Main scanning direction (FR direction) distortion balance adjustment                                   | No. 2/3 mirror base unit installing position adjustment<br>Copy lamp unit installing position adjustment |
|         |                          | (3)             | Main scanning direction (FR direction) distortion adjustment                                           | Rail height adjustment                                                                                   |
|         |                          | (4)             | Sub scanning direction (scanning direction) distortion adjustment                                      | Winding pulley position adjustment                                                                       |
|         |                          | (5)             | Main scanning direction (FR direction) magnification ratio adjustment                                  | SIM 48-1                                                                                                 |
|         |                          | (6)             | Sub scanning direction (scanning direction) magnification ratio adjustment                             | OC mode in copying (SIM 48-1)<br>SPF mode in copying (SIM 48-5)                                          |
|         |                          | (7)             | Off center adjustment                                                                                  | OC mode (SIM 50-12)<br>SPF mode (SIM 50-12)                                                              |
|         |                          | (8)             | SPF white correction pixel position adjustment (required in an SPF model when replacing the lens unit) | SIM 63-7                                                                                                 |
| C       | Image density adjustment | (1)             | Copy mode                                                                                              | SIM 46-1                                                                                                 |



## Quick Reference Guide: AR-5316 Simulation

### Simulation

#### Entering the Simulation Mode

Perform the following procedure to enter the simulation mode.

**"#" key → Interrupt key → "C" key → Interrupt key →  
Main code → Start key → Sub code → Start key**

#### Canceling the Simulation Mode

When the **clear all** key is pressed, the simulation mode is cancelled.

When the **interruption** key is pressed, the process is interrupted and the screen returns to the sub code entering display.

Note 1: After canceling the simulation mode, be sure to turn the OFF/ON power switch to the ON position.

Note 2: If the machine is terminated by a jam error or paper empty during copying in the adjustment by the simulation, recopying is required.

#### SIM Codes

Please refer to the SIM Codes list (pages 1 through 4) that follows.



SIM Codes

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Simulation (Pg. 1 of 4)

| Main Code | Sub Code | Contents                                          |
|-----------|----------|---------------------------------------------------|
| 01        | 01       | Mirror scanning operation                         |
|           | 02       | Mirror home position sensor (MHPS) status display |
|           | 06       | Mirror scanning operation aging                   |
| 02        | 01       | Single paper feeder (SPF) Aging                   |
|           | 02       | SPF sensor status display                         |
|           | 03       | SPF motor operation check                         |
|           | 08       | SPG paper feed solenoid operation check           |
|           | 11       | SPF PS release solenoid operation check           |
| 05        | 01       | Operation panel display check                     |
|           | 02       | Fusing lamp and cooling fan operation check       |
|           | 03       | Copy lamp lighting check                          |
| 06        | 01       | Paper feed solenoid operation check               |
|           | 02       | Resist roller solenoid operation check            |
|           | 10       | Cassette semi-circular roller cleaning            |
| 07        | 01       | Warm-up display and aging with jam                |
|           | 06       | Intermittent aging                                |
|           | 08       | Shifting with warm-up display                     |
| 08        | 01       | Developing bias output                            |
|           | 02       | Main charger output (Grid = HIGH)                 |
|           | 03       | Main charger output (Grid = LOW)                  |
|           | 06       | Transfer charger output                           |



SIM Codes  
(cont'd)

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Simulation (Pg. 2 of 4)

| Main Code | Sub Code | Contents                       |
|-----------|----------|--------------------------------|
| 10        | -        | Toner motor operation          |
| 14        | -        | Trouble cancel (except for U2) |
| 16        | -        | U2 trouble cancel              |
| 20        | 01       | Maintenance counter clear      |
| 21        | 01       | Maintenance cycle setting      |
| 22        | 01       | Maintenance counter display    |
|           | 02       | Maintenance preset display     |
|           | 03       | Jam memory display             |
|           | 04       | Jam total counter display      |
|           | 05       | Total counter display          |
|           | 08       | SPF counter display            |
|           | 09       | Paper feed counter display     |
|           | 12       | Drum counter display           |
|           | 13       | CRUM type display              |
|           | 14       | P-ROM version display          |
|           | 15       | Trouble memory display         |
|           | 17       | Copy counter display           |
|           | 18       | Printer counter display        |
|           | 21       | Scanner counter display        |
|           | 22       | SPF jam counter display        |



SIM Codes  
(cont'd)

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Simulation (Pg. 3 of 4)

| Main Code | Sub Code | Contents                                |
|-----------|----------|-----------------------------------------|
| 24        | 01       | Jam total counter clear                 |
|           | 02       | Trouble memory clear                    |
|           | 04       | SPF counter clear                       |
|           | 06       | Paper feed counter clear                |
|           | 07       | Drum counter clear                      |
|           | 08       | Copy counter clear                      |
|           | 09       | Printer counter clear                   |
|           | 13       | Scanner counter clear                   |
|           | 14       | SPF jam total counter clear             |
| 25        | 01       | Main motor operation check              |
|           | 10       | Polygon motor operation check           |
| 26        | 02       | Size setting                            |
|           | 03       | Auditor setting                         |
|           | 05       | Count mode setting                      |
|           | 06       | Destination setting                     |
|           | 07       | Machine condition check (CPM)           |
|           | 18       | Toner save mode setting                 |
|           | 30       | CE mark conformity control ON/OFF       |
|           | 31       | Auditor mode exclusive setup            |
|           | 36       | Cancel of stop at maintenance life over |
|           | 38       | Cancel of stop at drum life over        |
|           | 39       | Memory capacity check                   |
|           | 42       | Transfer ON/OFF timing control setting  |
|           | 43       | Side void amount setting                |
|           | 51       | Copy temporary stop function setting    |



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Simulation List (Pg. 4 of 4)

### SIM Codes (cont'd)

| Main Code | Sub Code | Contents                                                                                          |
|-----------|----------|---------------------------------------------------------------------------------------------------|
| 30        | 01       | Paper sensor status display                                                                       |
| 42        | 01       | Developing counter clear                                                                          |
| 43        | 01       | Fusing temperature setting                                                                        |
|           | 12       | Standby mode fusing fan rotation setting                                                          |
|           | 13       | Fusing paper interval control allow/inhibit setting                                               |
| 44        | 34       | Transfer current setting                                                                          |
|           | 40       | Setting of rotation time before toner supply                                                      |
| 46        | 01       | Copy density adjustment (300 dpi)                                                                 |
|           | 02       | Copy density adjustment (600 dpi)                                                                 |
|           | 09       | Copy exposure level adjustment, individual setting (Text) 300 dpi                                 |
|           | 10       | Copy exposure level adjustment, individual setting (Text) 600 dpi                                 |
|           | 11       | Copy exposure level adjustment, individual setting (Photo) 600 dpi                                |
|           | 18       | Image contrast adjustment (300 dpi)                                                               |
|           | 19       | Exposure mode setting (Gamma table setting/AE operation mode setting/Photo image process setting) |
|           | 20       | SPF exposure correction                                                                           |
|           | 29       | Image contrast adjustment (600 dpi)                                                               |
|           | 30       | AE limit setting                                                                                  |
|           | 31       | Image sharpness adjustment                                                                        |
| 48        | 01       | Main scanning magnification ratio adjustment                                                      |
|           | 05       | SPF mode sub scanning magnification ratio adjustment in copying                                   |
| 49        | 01       | Flash ROM program writing mode                                                                    |
|           | 12       | Standby mode fusing fan RPM setting                                                               |
| 50        | 01       | Image lead edge adjustment                                                                        |
|           | 06       | Copy lead edge position adjustment (SPF)                                                          |
|           | 10       | Paper off-center adjustment                                                                       |
|           | 12       | Document off-center adjustment                                                                    |
| 51        | 02       | Resist amount adjustment                                                                          |
| 53        | 08       | SPF scanning position automatic adjustment                                                        |
|           | 10       | SPF scan position change-over setting                                                             |
| 61        | 03       | HSYNC output check                                                                                |
| 63        | 01       | Shading check                                                                                     |
|           | 07       | SPF automatic correction                                                                          |
| 64        | 01       | Self print                                                                                        |



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User Programs (Pg. 1 of 2)

### List of User Programs

| Program Name                | Program No. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Default | Parameters                                                                       |
|-----------------------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------------------------------------------------------------------------|
| Auto clear time             | 1           | "Auto clear time" automatically returns the copy settings to the initial settings when a certain period of time elapses after a copy is made. This program is used to select the period of time. "Auto clear time" can also be disabled.                                                                                                                                                                                                                                                                                         | 60 sec  | 1 (OFF)<br>2 (10 sec)<br>3 (20 sec)<br>4 (60 sec)<br>5 (90 sec)<br>6 (120 sec)   |
| Preheat mode                | 2           | This function automatically switches the machine to a low power consumption state if the set duration of time elapses without the machine being used when the power is on. The POWER SAVE indicator lights up, however, the keys on the operation panel can be used. Normal operation automatically resumes when a key on the operation panel is pressed, a print job is received, or an original is placed.                                                                                                                     | 1 min   | 1 (1 min)<br>2 (5 min)<br>3 (30 min)<br>4 (60 min)<br>5 (120 min)<br>6 (240 min) |
| Auto power shut-off timer   | 3           | This function automatically switches the machine to a state that consumes even less power than preheat mode if the set duration of time elapses without the machine being used when the power is on. All lights except the POWER SAVE indicator and ON LINE indicator go off. To resume normal operation, press the [START] key. Normal operation also resumes automatically when a print job is received or scanning is begun from a computer. While in auto power shut-off mode, no keys (except the [START] key) can be used. | 5 min   | 1 (5 min)<br>2 (30 min)<br>3 (60 min)<br>4 (120 min)<br>5 (240 min)              |
| Stream feeding mode         | 4           | When copying using the SPF, during the period of time that the SPF indicator blinks after an original has been scanned (about 5 seconds), a subsequent original can be placed and automatically fed into the machine.                                                                                                                                                                                                                                                                                                            | OFF     | 0 (OFF)<br>1 (ON)                                                                |
| Auto power shut-off setting | 5           | Use this setting to enable or disable auto power shut-off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ON      | 0 (OFF)<br>1 (ON)                                                                |



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User Programs (Pg. 2 of 2)

### List of User Programs (cont'd)

| Program Name                 | Program No. | Description                                                                                                                                                                          | Default                     | Parameters                                           |
|------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------------------------|
| Auditing mode                | 10          | Use to enable or disable "Auditing mode". "Auditing mode" is initially disabled.                                                                                                     | OFF                         | 0 (OFF)<br>1 (ON)                                    |
| Account number entry         | 11          | Use to set up account numbers. Up to 20 accounts can be established.                                                                                                                 | --                          | --                                                   |
| Account number change        | 12          | Use to change an account number.                                                                                                                                                     | --                          | --                                                   |
| Account number deletion      | 13          | Use to delete an account number. A single account number can be deleted, or all account numbers at once.                                                                             | Delete<br>Single<br>Account | 0 (Delete single account)<br>1 (Delete all accounts) |
| Number of copies per account | 14          | This displays the number of copies made by each account. The maximum count is 49,999. If this number is exceeded, the count will start over from 0.                                  | --                          | 0 (OFF)<br>1 (ON)                                    |
| Resetting account            | 15          | Use to reset the copy count of an account to 0. The copy count of a single account or of all accounts can be reset.                                                                  | Reset single<br>account     | 0 (Reset single account)<br>1 (Reset all accounts)   |
| Resolution in Auto/Text mode | 23          | This setting is used to change the copy resolution in AUTO and TEXT mode from 600 x 300 dpi to 600 x 600 dpi (high-quality mode). Scanning is slower when high-quality mode is used. | 300 dpi                     | 1 (300 dpi)<br>2 (600 dpi)                           |



## Quick Reference Guide: AR-5316

### Maintenance Table

#### Maintenance Table

##### Legend

- |   |                                                  |
|---|--------------------------------------------------|
| X | Check (Clean, adjust, or replace when required.) |
| O | Clean                                            |
| ▲ | Replace                                          |
| △ | Adjust                                           |
| ☆ | Lubricate                                        |

| Unit Name               | Part Name                |                                | When Calling |
|-------------------------|--------------------------|--------------------------------|--------------|
| Optical section         | Lamp unit                | Reflector                      | ○            |
|                         |                          | Mirror                         | ○            |
|                         | No. 2/3 mirror unit      | Mirror                         | ○            |
|                         |                          | Pulley                         | X            |
|                         | CCD peripheral           | Lens                           | ○            |
|                         | Glass                    | Table glass                    | ○            |
|                         |                          | White plate                    | ○            |
|                         | Other                    | Drive wire                     | X            |
|                         |                          | Rail                           | X ☆          |
|                         |                          | Document cover                 | ○            |
|                         |                          | Document size sensor           | ○            |
| LSU○                    |                          | Dust-proof glass               | ○            |
| Paper feed section      | Multi-paper feed section | Take-up roller (manual/SPF)    | ○            |
|                         |                          | Paper feed roller              | ○            |
|                         |                          | Spring clutch                  | ○ ☆          |
| Paper transport section |                          | PS roller                      | ○            |
|                         |                          | Transport (paper exit) rollers | ○            |
|                         |                          | Spring clutch                  | ○ ☆          |
| Fusing section          |                          | Upper heat roller              | ○            |
|                         |                          | Pressure roller                | ○            |
|                         |                          | Pressure roller bearing        | X            |
|                         |                          | Upper separation pawl          | X            |
|                         |                          | Lower separation pawl          | X            |
|                         |                          | Cleaning pad                   | X            |
| Drive section           |                          | Gears                          | X ☆          |
|                         |                          | Belts                          | X            |
| Paper exit section      |                          | Ozone filter                   | X            |